

Work Order ID 83408

83408

Page 1

April-18-12 8:06:57 AM

Item ID: D6103-003

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Round Billet, Aluminum

Stop ***NS2***

Start Date: 18/04/2012 Start Qty: 30.00

30

Cust Item ID:

Required Date: 02/05/2012 Req'd Qty: 30.00

30

Customer:

Reference:

Approvals: Process Plan: *MLJ*

Date: *12/04/18*

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D6103

Rev B

100

0.00

100

PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: *116761* a)Description: Alluminum round billet b)
Ø3.500" x 12.500" longc) Tolerance on all dimensions are +0.030"/-0.000"

d) Material: 7075-T7351 (QQ-A-225/9) Material certification required

CZ 12/04/19 (30)

110

Receive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Memo

0.00

Packaging

Ensure material certification is attached

LC 12/4/20 (33)

120

QC6- Inspect dimensions to drawing

0.00

120

QC

Memo

0.00

Quality Control

CZ 12/04/30 33

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 83408

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April-18-12 8:06:57 AM

Item ID: D6103-003

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Round Billet, Aluminum

Start Date: 18/04/2012 Start Qty: 30.00

30

Cust Item ID:

Required Date: 02/05/2012 Req'd Qty: 30.00

30

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

Identify as per dwg & Stock Location: Mat 43 0.00

OK 12/04/30

130

Packaging

Memo

0.00

33

Packaging

140

QC21- Final Inspection - Work Order Release 0.00

140

QC

Memo

0.00

Quality Control

12/4/30

12-04-30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-18-12 8:07:01 AM

Page 1

Work Order ID: 83408

83408

Parent Item: D6103-003

D6103-003

Parent Item Name: Round Billet, Aluminum

Start Date: 18/04/2012

Required Date: 02/05/2012

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP Rev:A New Issue 06-02-09 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6103-003P		Purchased	No			110	Each	0.0000	1	30			
D6103-003P									**				
round alum billet													

4/24/12 (33)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

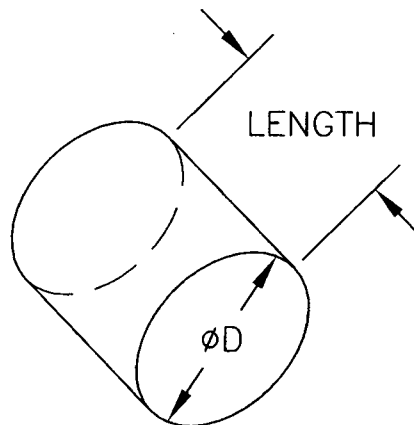
NOTE: Date & initial all entries



DESIGN PH	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D6103	Rev. B SHEET 1 OF 1
DATE 06.01.31		TITLE ROUND BILLET, ALUMINUM	SCALE NTS
A	01.04.10	NEW ISSUE	
B	06.01.31	ADD D6103-003	

SPECIFICATION CONTROL DRAWING

RELEASED
06.02.07



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 83708 MJS
12/04/18

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, DIAMETER x LENGTH (+0.030/-0.000) AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

Part No.	Alloy	D (Diameter)	Length
D6103-001	7075-T6/T651 (QQ-A-200/11 OR QQ-A-225/9)	Ø3.250	12.50
D6103-003	7075-T7351 (QQ-A-225/9)	Ø3.500	12.50

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO16761

Purchase Order Date 4/19/12

PO Print Date 4/19/12

Page Number 1 of 1

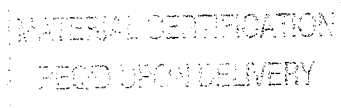
Order From : VC-MET001
METAUX CASTLE
A.M. CASTLE & CO. (CANADA) INC. - BOX B9204 PO BOX 9100
TORONTO, ON M4Y 3A5
CA

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	514 694 9575	Requisition Nbr	
Vendor Fax	514 695 3281	Tax Resale Nbr	10127-2607
Vendor Account Nbr		Terms	Net 30
		Currency	CAD
		FOB	Destination-Collect

Ship To : DART AEROSPACE LTD 1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA



Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D6103-003P	round alum billet	5/04/12 Yes	30.00 Each	Yours ppd	\$67.6000	\$2,028.00
PO Total:							\$2,028.00



No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable

Change Nbr: 1

Change Date: 4/19/12

Certified Inspection Report

05/25/11
09:30:29

Alcoa Inc.
Massena Operations
Park Avenue East, Massena, NY 13662



Customer Castle A M & Co	Customer P.O. No. 109532	Customer Part No. (8808)	Alcoa Order No. MMC-97150-002	Govt. Contract No.
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Ship To **A. M. Castle & Company**
3400 North Wolf Road
Bay #7
Franklin Park, IL 60131

We hereby certify that the material covered in this report has been inspected in accordance with, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and have the mechanical properties shown on the face of this sheet. Manufactured under an ISO/QS-9000 registered quality management system.
Melted and manufactured in the USA.

Thomas J. Klemp, Quality Assurance Manager

Thomas J. Klemp

Date Shipped 05/25/11	Weight Shipped 10,104 lbs	Product CFRB-CF ROD Specific Length	BOL 000159457
Alloy - Temper 7075-T7351	Size 3.50000 IN	Shape DIA Config 12 FT	QRR

Specifications:

A97075-11 Rev 10 w/exc & comments per T
Klemp email dtd 1/5/10
Material conforms to T73 requirements
Minimum mechanical properties to apply:
68 KSI Tensile Strength
56 KSI Yield Strength
10% Elongation
AMS 4124D (Except Size)
QQA-225/9E (Except Size)
ASTM B211-03 (Except Size)
AMS-QQA-225/9 (Except Size)

Product produced and marked to the requirements of AMS-QQ-A-225/9 also meets the requirements of QQ-A-225/9.
Product produced and marked to the requirements of QQ-A-225/9 also meets the requirements of AMS-QQ-A-225/9.

TEST REQUIREMENTS	Test	Test	Test	Test	Test	Test	Test	Test	Test	Test
	U.T.S.	T.Y.S.	%Elong	Cond						
Max:		67.9								
Min:	68.0	56.0	10.0	38.0						

Test Results	Lot / Work Order	No. of Tests		Test	Test	Test	Test	Test	Test	Test	Test
				U.T.S.	T.Y.S.	%Elong	Cond				
MA011003332	1		Max:	72.3	61.2	15.0	41.1				
			Min:	72.3	61.2	15.0	41.1				
MA011003333	1		Max:	71.0	59.4	15.0	41.4				
			Min:	71.0	59.4	15.0	41.4				
MA011004085	1		Max:	72.3	61.0	15.0	40.9				
			Min:	72.3	61.0	15.0	40.9				

TEST ABBREVIATIONS

U.T.S. Ultimate Tensile Strength KSI
Cond Conductivity % IACS

T.Y.S. Tensile Yield Strength KSI

%Elong Elongation % in 2"

Aluminum Association Chemical Composition Limits (in Weight %)

ALLOY		%SI	%FE	%CU	%MN	%MG	%CR	%ZN	%TI	%Others	%Others	%AL			
7075	MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.15	Rem			
	MIN		1.2			2.1	0.18	5.1		Each	Total				